IN THE SPECIFICATION

Please amend page 2, lines 6-10 of the present specification as follows:

This object is achieved by means of a radiation sensor, in accordance with the invention, of an integrated type which is provided with at least one light-sensitive and/or X-ray-sensitive sensor element (11) whose output signal indicates the amount of radiation absorbed by the sensor element, and with at least one temperature sensor (12, 12a, 12b) whose output signal indicates the temperature prevailing at the temperature sensor and also with at least one further sensor element (12) which is sensitive to a physical quantity other than that whereto the light-sensitive and/or X-ray-sensitive sensor element (11) is sensitive, all sensor elements (11, 12) delivering similar output signals and being connectable to an evaluation unit (13) as similar components wherein said temperature sensor is integrated on said chip of said radiation sensor , said chip having a substantially uniform temperature distribution so that temperature sensed by said temperature sensor corresponds to the temperature of the entire radiation sensor chip enabling direct and accurate determination of the temperature at the radiation sensor. The object is further achieved ~~as disclosed in the characterizing part of claim 1, by means of a radiation sensor as disclosed in the characterizing part of claim 2, as well as~~ by means of a radiation detector ~~as disclosed in the characterizing part of claim 7~~, notably an X-ray detector for a computed tomography apparatus, which said detector is provided with said at least one radiation sensor, as well as with an associated evaluation unit for reading out and evaluating the output signals delivered by the radiation sensor.. Advantageous embodiments are described below ~~disclosed in the dependent claims~~.